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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,831	07/10/2003	Takashi Naganawa	520.42791X00	8887

20457 7590 09/15/2005

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EXAMINER

WRIGHT, INGRID D

ART UNIT PAPER NUMBER

2835

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/615,831

Applicant(s)

NAGANAWA ET AL.

Examiner

Ingrid Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-8 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 7/10/03.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (US 6587336 B2) in view of Aguilera (US PN 5606341) and further in view of Esterberg et al. (US PN 5566048).

With respect to claim 1, Chu et al., teaches an electronic apparatus (10) (Fig. 2, 3A) having a first case (42) with a heat generating device (48) attached and a second case which is supported on the first case (42) with plural hinges (46) and a display (45) comprising an incoming radiational jacket (50), a radiation pipe (see column 6, line 50), a radiation plate (62), a tank (66), a liquid driving means (56) and a hinge (46) through which a tube for transferring the liquid is passed (see for example, Fig. 2 and Fig. 3A).

Chu et al. does not teach plural hinges that include a first hinge through which two tubes for transferring the liquid is passed and a second hinge through which an electric wire from the display is passed.

Aguilera teaches (Fig. 1) a laptop computer (10) and a hinge through which two tubes for transferring the liquid is passed.

Aguilera does not teach an electric wire that is passed through a hinge.

Esterberg et al. teaches (Fig. 4, 9) a hinge (18) for a portable computer through which an electric wire (140) is passed so as to provide a channel for restricting crimping and bending forces on the wire (column 7, lines 55-63).

Since inventions of Chu et al., Aguilera and of Esterberg et al. are from the same field of endeavor (portable computers) the purpose of the electric wire being routed through the hinge as taught by Esterberg et al. and the hinge through which two tubes for transfer of liquid is passed as taught by Aguilera would be recognized in the invention of Chu et al.

It would have been obvious to a person of ordinary skill in the computer art at the time the invention was made to route the wires of Chu et al. through the hinge of the device as taught by Esterberg et al., in order to restrict crimping and bending forces on the wire and to prolong the service life of said wire and to utilize the device as taught by Aguilera to transfer liquid or coolant through two tubes necessary for the first hinge assembly of Chu et al.

With respect to claim 2, Chu et al. teaches (Fig. 3B) a distance covered by the liquid from the incoming radiational jacket (50) to the tank (66) is longer than a distance covered by the liquid from the tank (66) through the liquid driving means (56) to the incoming radiational jacket (50) (Fig. 3B).

With respect to claim 3, Chu et al. teaches (Fig. 2) a display case (44) covering the radiation plate (62) that forms a rear surface of the second case (Fig. 2).

Chu et al. does not teach a resin display case.

Resin was known for making casings at the time the invention was made.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use resin for making the display, of Chu et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With respect to claim 5, Chu et al. teaches an electronic apparatus (40) where the depth of the display case (44) corresponds to the thickness of the tank (66). (inherently,

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since the thickness of the tank placed in the display case would determine the depth of the display case).

With respect to claim 6, Chu et al. teaches (Fig. 3B) a tank that is placed in a position closest to the first hinge through which a tube for transferring the liquid is passed (Fig. 3B).

Chu et al. does not teach two flexible tubes for transferring liquid.

Aguilera teaches (Fig. 1) a laptop computer (10) and a hinge through which two tubes for transferring liquid is passed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the two tubes for transferring liquid as taught by Aguilera in the first hinge of Chu et al., in order to allow a forward and return path to the liquid driving means.

With respect to claim 7, Chu et al. teaches a tank (66) (Fig. 3A) that is covered with the radiation plate (62) and a radiation plate that is covered with the display case (44) (Fig. 3A).

With respect to claim 8, Chu et al. teaches (Fig. 2) a tank attached to the radiation plate, plural hinges (46) and a tube (see for example, Fig. 2 and Fig. 3A).

Chu et al. does not teach the first hinge and the second hinge independently provided in correspondence with passage of two flexible tubes for transferring the liquid and the electric wire, respectively for safety and elimination of electrical problems.

Aguilera teaches (Fig. 1) a laptop computer (10) a hinge through which two tubes for transfer of liquid is passed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the two tubes for transferring liquid as taught by Aguilera in the first hinge of Chu et al., in order to allow a forward and return path to the liquid driving means and utilize the electric wire in the tube of Chu et al. for passage through the second hinge of Chu et al., in order to provide independent hinge configurations.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ohashi et al. (US PN 6449149 B1), Ishikawa et al. (US PN 6728102 B2), Cipolla et al. (US PN 6031716), Nakagawa et al. (US PN 6519148 B2), Shigeru Hidewasa (US PN 6762935 B2), Takeshi Igarashi (US PN 6865077 B2), Ohashi et al. (US PN 6611425 B2), Nakagawa et al. (US PN 6519147 B2), Nakagawa et al. (US PN 6791834 B2), Bhatia et al. (US PN 5718282), Kitano et al. (US PN 6741464 B2), Donahoe et al. (US PN 5757615), Goto et al. (US PN 6069791), Minamitani et al. (US PN 6697253 B2), Timonhy J. Jondrow (US PN 5953206), & Cipolla et al. (US 6507488 B1) show the general state of the art regard cooling for heat generating components in electronic apparatus or dual case computer configurations.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



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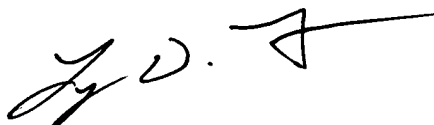
5. Final Applicant's Amendment necessitated new ground of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ingrid Wright whose telephone number is (571) 272-8392. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2800, ext 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/7/05  
IDW

  
**LYNN FEILD**  
**SUPERVISORY PATENT EXAMINER**  
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